



Ethical Access and Pharmacovigilance Study of Herbal Antimalarial Products in Ghana

Malaria is a life-threatening mosquito-borne blood disease caused by Plasmodium parasites. In 2017, there were an estimated 219 million cases of malaria in 90 countries representing 435,000 deaths. 93% of these deaths occurred in the African Region (WHO, 2017). This project aims to evaluate the ethical access to herbal antimalarial products and ascertain their effectiveness as well as the possible Adverse Drug Reactions (ADRs) of the commonly used herbal antimalarial products on the Ghanaian market.

1. PERSONAL INFORMATION

- (A) Age group: (15 - 19) (20 - 24) (25 - 29) (30 - 39) (40 and above)
- (B) Gender: Male Female Other Prefer not to say
- (C) Education level: Senior high Vocational/Technical Tertiary Postgraduate Specify if others
- (D) What is your occupation?

2. Basic Questions on Malaria

- (A) Is Malaria a disease caused by plasmodium parasites? Yes No
- (B) What are the signs and Symptoms of malaria? **(You can choose more than one options)**
- Fever. Chills Profuse sweating Loss of appetite General body pains Specify if others
- (C) How often do you get malaria infection?
- Every two months Every six month Annually Rarely
- (D) How often do you use malaria prevention?
- Always Sometimes Almost never Never
- (E) What do you use for Malaria prevention? **(You can choose more than one options)**
- Treated mosquito net Mosquito repellent Insecticide spray Protective clothing Medication None
- Specify if others.....
- (F) What is your first point of care in treating malaria?
- Pharmacy/Over the counter Herbal shop General hospital License chemical shop Traditional healer
- Specify if Others
- (G) When treating Malaria, is any test done to confirm your signs and symptoms?
- Sometimes Always Not at all

3. Access to Malaria products / treatment

(A) What type of antimalarial product do you mostly use?

Herbal antimalarial product Orthodox antimalarial product Both None

(B) What type of antimalarial product do you prefer?

Herbal antimalarial product Orthodox antimalarial product

(C) What was the reason for your choice? **(You can choose more than one options)**

Cost Ease of access Effectiveness Minor side effects Specify if others

(D) Which of these herbal antimalarial products have you used? **(You can choose more than one options)**

Taabea Herbal Mixture Time Herbal Mixture Adutwumwaa Malamix Adom Herbal Mixture

Specify if other.....

(E). How frequently do you use herbal antimalarial product?

Any time I have malarial Every three months Every six months Annually Once in a while

(F) Where do you usually get your choice of herbal antimalarial product?

Advertised agents Random Selection Prescription / Pharmacy Drug paddlers Friends' recommendation
 License chemical shop Traditional healer Specify if others.....

(G) Do you check/find regulatory certification /approval stamps on the product (e.g. FDA, GSA)?

Sometimes Always Not at all

(H) What factors influence your choice and source of herbal antimalarial product? **(You can choose more than one options)**

Advertisement Random Selection Prescription Drug peddlers Friends' recommendation
 Specify if others.....

(I) Do you usually check/find patient information leaflet in the product package?

Sometimes Always Not at all

(J) If **YES**, do you follow the instructions?

Yes No

(K) If **NO**, how do you take the antimalarial product? Specify.....

(L) How many bottles of herbal antimalarial product do you take for effective treatments?

1 - 2 3 - 4 4 - 5 Specify if Others.....

(M) How long (days) do you use these herbal products?

1-3 days 4-7 days 7-14days Specify if others

(N) Do you use the product for any other disease condition other than treating malaria?

General body pains Typhoid Menstrual pains Piles Specify if others

4. Adverse Drug Reactions (ADRs).

ADR is a respond to a drug which is noxious and unintended which occurs at doses normally used in man for prophylaxis, diagnosis or therapy of disease.

(A) Have you ever had any unwanted effect(s) with any herbal antimalarial products?

Yes No

(B) On a scale of 1 to 5, how would you range the severity of the harmful effects?

1 (Mild) 2 (Moderate) 3 (Bad) 4 (Severe) 5 (Very Severe)

(C) What were the unwanted effect(s). **(You can choose more than one options)**

Blurred vision/Dizziness Itching Nausea and vomiting General body weakness

Blocked ears/ringing ears significant disability/incapability Others specify

(D) Based on the unwanted effect(s) did you continue the treatment? Yes No

(E) If **YES**, did the unwanted effect stop when you continued the treatment? Yes No

(F) If **NO**, did the unwanted effect stop after withdrawal of the treatment? Yes No

(G) When did these harmful effects occur? In the course of treatment After treatment

(H) What were the means of handling these harmful effects?

Resolved itself and did not require hospital care. Affected my health status and required hospital care

It was life threatening and required immediate hospital attention Reported to the caregiver

Reported to the manufacturer. If others specify;

(I) Did these unwanted effect(s) affect your next choice of herbal antimalarial product? Yes No

(J) Were you taking any other medication(s) before the suspected reaction(s)? YES NO